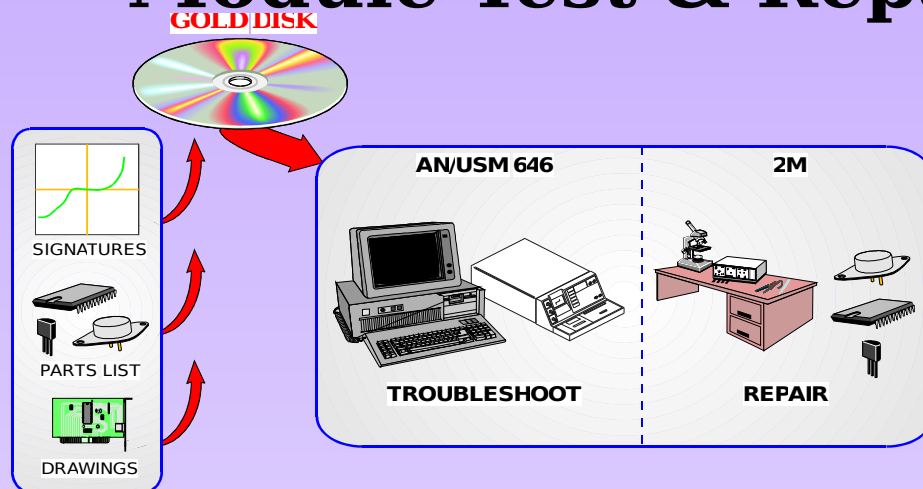




Brief for FLSIC (3/6/03) on Miniature/Microminiature (2M) Module Test & Repair (MTR) Program



2M MTR PROGRAM HOME

PAGES

[Http://WWW.CRANE.NAVY.MIL/2M](http://WWW.CRANE.NAVY.MIL/2M)

[HTTPS://WWW.NOR.NUWC.NAVY.MIL/MTR](https://WWW.NOR.NUWC.NAVY.MIL/MTR)

Tom Ingram SEA04M32
DSN 326-3380
COM 202-781-3380
IngramTW@NAVSEA.NAVY.
MIL

Building 107, 4E 2006



SEA 04M32

Responsibilities

2M MTR Equipment

Outfitting_

- 294 Ships and Shore Commands
- 18 Submarines
- 7 CNET Training Commands
- 10 FTSCs 2M MTR Inspector Sites
- New Equipment Evaluation/Selection
- 2M MTR Equipment ILS
- 2M Piece Part APLs (41 Ship Class & 20 Shore)

**New Ship/ System PM, SYSCOM, FMS
and other Services/USCG Interface**

2M MTR Program Processes_

**MTR Test Routine Development &
Distribution**



NAVSEA 2M MTR Program Infrastructure

CNO N43*
2M MTR Resource Sponsor

NAVSEA 04M32
2M/MTR Program/ILS Manager

NSWC Crane
Code 6083

2M Equipment
ISEA/TDA
- 2M Certifying Agent
- Piece Part Outfitting
(SCN)

FTSCLANT 4103
FTSCPAC 203
FTSCLANT/PAC DETs

2M
Inspectors/FSE

NAVICP-M
Mechanicsburg
Code 058

- 2M Piece Part Support
- 2M/MTR Equipment Support
- Gold Disk Candidate List Data
- CCA/EM Requisition Data
- BOSS Funds for Gold Disks

Seven 2M/MTR
Training Commands

NUWC DET FEO
NORFOLK
Code 201V

MTR Equipment
ISEA/TDA
- Gold Disk
Development Mgr
- GD

GOLD DISK DEVELOPERS

- SPAWAR/SEAAIR Field Act.
- Navy IMAs and Training Cmds
- Naval/USMC Aviation IMAs
- USCG (Surface/Aviation)
- USMC (Ground)
- USAF MAJCOMs
- USA



Navy 2M MTR Gold Disk Infrastructure

HQMC (I&L/P&R)
MARCORPSYSCOM
(TMDE)

USMC
(GROUND)
Echelon 3 & 4
Cmds

Surface Ships,
Subs, Shore
Commands

CNO (N43)
NAVSEA
04M32

NUWCDET
FEO NORFOLK
NSWC CRANE

NAVAL AVIATION
AIMDs, MALS & NADEPS

CNO (N78)
NAVAIR (AIR 3.6, PMA 260D)

1. Maintain standard 2M
MTR Gold Disk hardware,
software and ILS.

2. Obtain maximum
synergy from shared and
unique infrastructure



Training for MTR Test Equipment & 2M Repair

Cours

Completion of all courses results in M

AN/USM-646
A-100-0076
5 days

Miniature
Electronic Repair
A-100-0072
26 days
NEC 9527

Microminiature
Electronic
Repair
A-100-0073
12 days
NEC 9526

Course Location

FTC Norfolk *

FTC Mayport

FTC San Diego

NAMTRAGRUDET Whidbey
Is.

ATG MIDPAC

ATG WESTPAC)

Instructor (9509) & Inspector (9503)

FTC Norfolk

FTC Mayport

FTC San Diego *

NAMTRAGRUDET Whidbey
Is.

ATG MIDPAC (Pearl
Harbor)

NAMTRAGRUDET Atsugi,
Japan

ATG WESTPAC

FTC Norfolk

FTC Mayport

FTC San Diego *

NAMTRAGRUDET Whidbey
Is.

ATG MIDPAC Pearl Harbor

NAMTRAGRUDET Atsugi,
Japan

ATG WESTPAC

*Course Curriculum Model
Manager

Standard 2M Micro Configuration (PRC 2000-SMT)

Microscope, tools,
 ESD
 material and
 consumables
 not shown.



Portable 2M REPAIR Kit

- Pace MBT-250
- Subset 2M AEL
- < 2 ft³ storage case
- No microscope *



Pace TF 500 (New Shore IMA 2M BGA/Fine Pitch Rework



MTR Test Equipment Suite

**AN/USM-646
TEST STATION
(Huntron 5100DS
& Controller)**



SHORTTRACK 90
SWITCHER 410
HUNTRON 2000



PROTRACK Configuration AN/USM-674(V)2

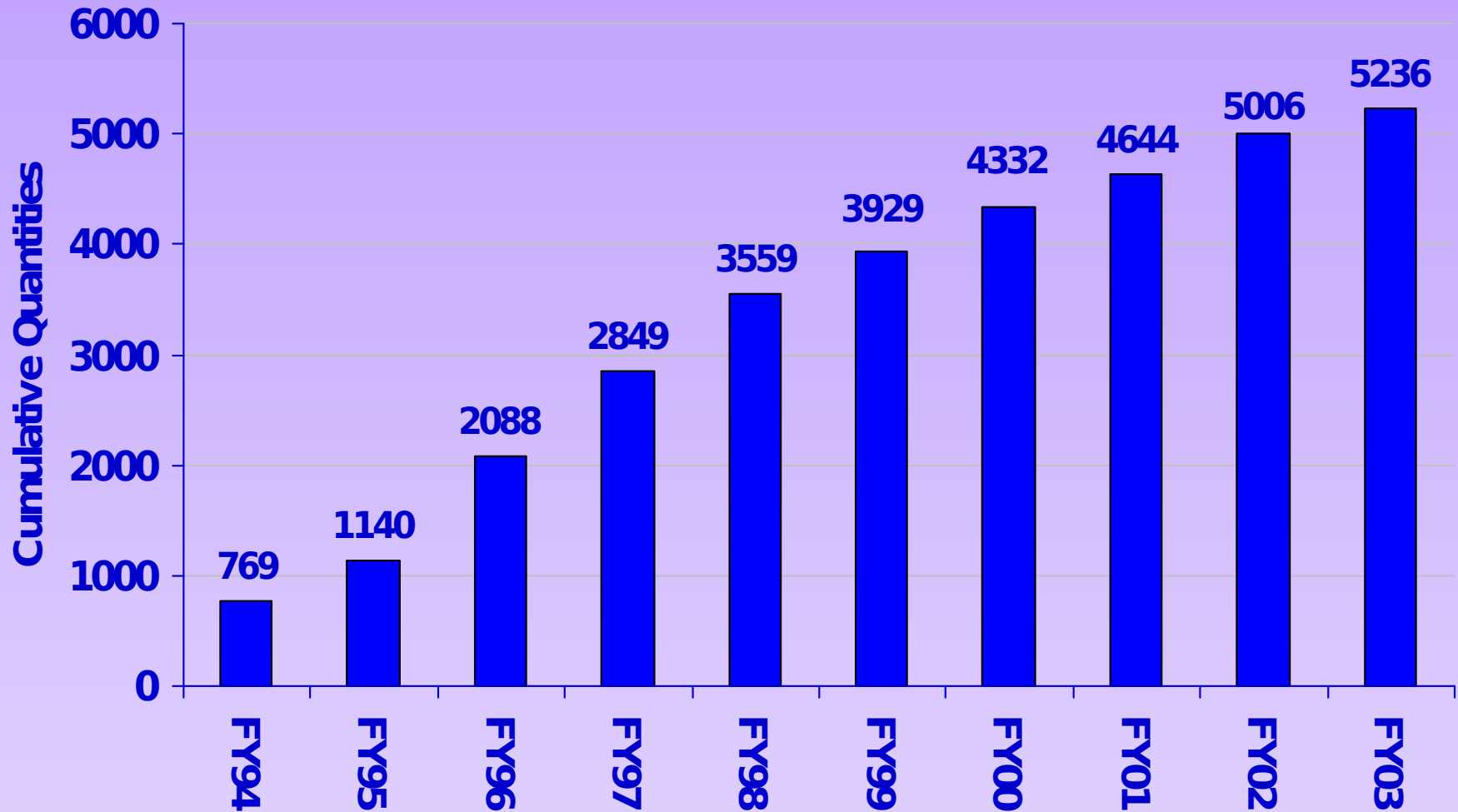


PINPOINT II AN/USM-676

40 Planne
FY 03>



Gold Disk Production



FY03 Total as of 22 FEB 2003



Benefits of 2M MTR Utilization

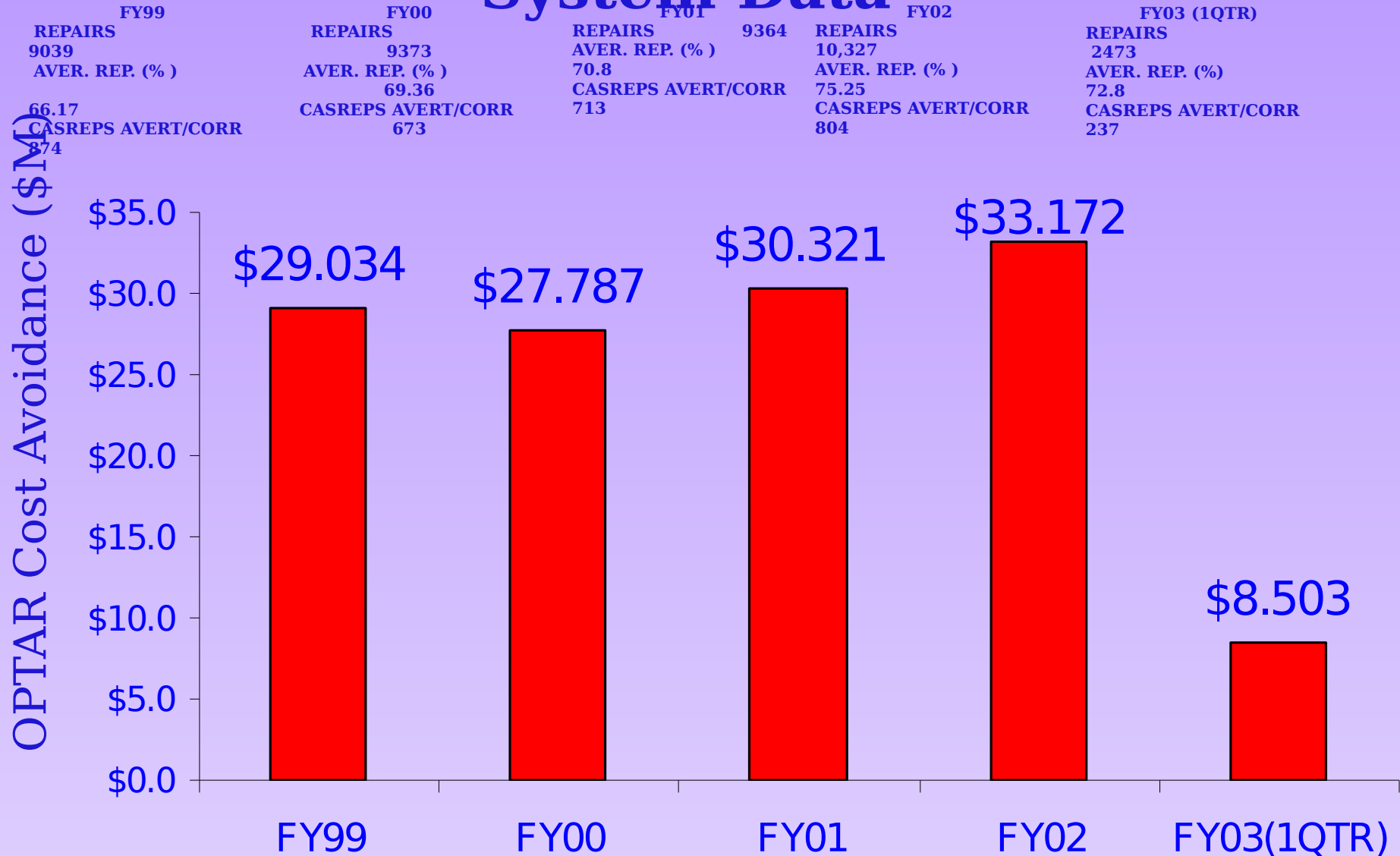
From 1 Oct. 1997 to 30 Sept. 2002 Navy commands outfitted by NAVSEA 04M32 reported **46,246 2M repairs** completed which resulted in **3,962 CASREPS averted/corrected** and **\$146.6M in OPTAR cost avoidance**. **Annual program investment was less than \$6M.**

Results in reduced requirements for shipboard and shore spares.

Reduces ship tech assists from off ship tech reps.

Promotes sailor “Quality of Life” by allowing them to be self sufficient.

Module Test & Repair Tracking System Data



DATA DOES NOT INCLUDE ANY REPAIRS UTILIZING 2M/MTR EQUIPMENT COMPLETED
AT NAVAL AND MARINE AVIATION OR MARINE GROUND MAINTENANCE ACTIVITIES.



Requirements for Successful Utilization of 2M MTR Capabilities

Command Attention and compliance with JFMM (CLF/CPF INST 4790.3), Volume IV, Part I, Chapter 11 including Quarterly MTRTS Reports.

Trained Personnel with NEC 1591 and Current Certification

Work center properly outfitted with 2M MTR HW/SW, tools, accessories and 2M piece parts

Effective coordination between Supply and Maintenance personnel to promote screening and repair attempts when feasible for all failed circuit cards and electronic modules